NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

# *NOAA In Your State*

# Nevada

***NOAA** is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them. From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers and other decision makers with reliable information they need when they need it.*

***The following is a summary of NOAA facilities, staff, programs, or activities based in, or focused on, your state or territory: Starting with highlights, then by congressional districts and cities or towns, and then statewide programs.***

## *Highlights of NOAA in Nevada*

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|---|---|---|
| California-Nevada Climate Applications Program | Reno | NV-2 |
| Special Operations and Research Division | Las Vegas | NV-4 |

## *Weather Forecast Offices*

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|---|---|
| Elko | NV-2 |
| Reno | NV-2 |
| Las Vegas | NV-3 |

**National Weather Service (NWS) Weather Forecast Offices (WFO)** are staffed 24/7/365 and provide weather, water, and climate forecasts and warnings to residents of Nevada. There are 122 WFOs nationwide of which three are in Nevada. Highly trained forecasters issue warnings and forecasts for weather events, including severe thunderstorms, tornadoes, hurricanes, winter storms, floods, and heat waves to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including wireless emergency alerts, social media,weather.gov, and NOAA Weather Radio All Hazards. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs that strengthen working relationships with local partners in emergency management, government, the media and academic communities. Forecasters provide Impact-based Decision Support Services (IDSS), both remotely and on-site during critical emergencies such as wildfires, floods, chemical spills, and major recovery efforts. To gather data for forecasting and other purposes, NWS WFO staff monitor, maintain and use Automated Surface Observing Stations and Doppler Weather Radar. In addition to the WFOs, NWS operates specialized national prediction centers and regional headquarters throughout the U.S. for a total of 168 operational units. Over 85% of NWS' workforce is in the field. For current Nevada weather, visit www.weather.gov and, on the national map, click on the relevant county or district.

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### *NV-2*

### *Denio*

**Office of Oceanic and Atmospheric Research (OAR) - U.S. Climate Reference Network**

The US Climate Reference Network (USCRN) is an operationally viable research network of more than 138 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). ARL/ATDD manage the USCRN in partnership with NOAA's NESDIS/NCEI.

### *Elko*

**National Weather Service (NWS) - Weather Forecast Office-** See Page 1 for details.

### *Reno*

**National Weather Service (NWS) - Weather Forecast Office-** See Page 1 for details.

**National Environmental Satellite, Data, and Information Service (NESDIS) - National Centers for Environmental Information - Western Regional Climate Center**

NOAA NCEI's six Regional Climate Centers (RCCs) support the development and delivery of a wide range of place-based climate science and information products and services to assist decision makers in making informed decisions. The RCCs are a federal-university cooperative effort that supports the operational production and delivery of climate data and information to decision-makers at regional levels. The RCCs also participate in basic and applied climate research as well as user engagement and outreach activities. The service provided by the RCCs has evolved through time to become an efficient, user-driven program that exemplifies many of the components that have been cited for effective regional climate services.

**Office of Oceanic and Atmospheric Research (OAR) - California-Nevada Climate Applications Program**

The California-Nevada Climate Applications Program (CNAP) is a cooperative agreement between NOAA's Climate Program Office (CPO), Scripps Institution of Oceanography, and the Desert Research Institute. It is one of several Regional Integrated Sciences and Assessments (RISA) teams contributing to the development of knowledge, expertise,

and abilities of decision-makers to plan and prepare for climate variability and change. CNAP has a long history of providing cutting edge climate science to stakeholders in the region. The program began with an emphasis on California issues in 1999 as the California Applications Program (CAP). In 2011 the team expanded its geographic scope to include Nevada and became CNAP. CNAP's core priority sectors include understanding effects of climate variation on water resources, natural resources and coastal resources, along with other linked systems including societal components. Since 2005, CNAP has worked closely with the California Energy Commission (CEC) and other State Agencies in taking a leading role in the first three California Climate Change Vulnerability and Adaptation Assessments, and is currently completing the Fourth California Climate Change Assessment. CNAP has also collaborated with the California Department of Water Resources (DWR) in providing data, observations and interpretation to better anticipate how climate and associated weather events affect water resources and water hazards in the State. CNAP, working with California agencies including DWR, CEC and the California Ocean Protection Council, has contributed to a better understanding of climate impacts on the California coast, including the occurrence of coastal storms and two iterations of Sea Level Rise Guidance to State Agencies. Another focus of CNAP is working with fire agencies in California, Nevada and across the western U.S. to investigate effects of climate and weather on wildfire. With increased emphasis on Nevada climate issues, CNAP has worked with Great Basin tribes to understand barriers to climate data and helped develop a resilience plan with Washoe County. More recently CNAP is working with Southern Nevada Water Authority to better understand how climate variation drives changes in water demand in their Clark County service territory. CNAP is also working with the Bureau of Land Management (BLM), and local National Weather Service offices on climate related projects, and CNAP researchers recently teamed with the Science Climate Alliance – South Coast to develop a comprehensive study of the vulnerability of San Diego County ecosystems to climate influences. Core partners of CNAP include the Scripps Institution of Oceanography, the Desert Research Institute, and the Western Regional Climate Center.

### *NV-3*

### *Las Vegas*

**National Weather Service (NWS) - Weather Forecast Office-** See Page 1 for details.

### *NV-4*

### *Baker, Mercury*

**Office of Oceanic and Atmospheric Research (OAR) - U.S. Climate Reference Network**

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### *Desert Rock*

**Office of Oceanic and Atmospheric Research (OAR) - Surface Radiation Measurement Network**

The Earth System Research Laboratory Global Monitoring Laboratory(ESRL/GML) operates seven stations as part of its surface radiation budget network (SURFRAD). The station measurements support regional and global weather and climate research with accurate, continuous, long-term measurements of the surface radiation budget over the United States. Solar radiation is the driving energy for geophysical and biological processes that control weather and affect planetary life; understanding the global surface energy budget is therefore key to understanding climate and the environmental consequences to agriculture and other statewide concerns. Because it is impractical to cover the whole earth with monitoring stations, the answer to global coverage lies in reliable satellite-based observations. Accurate and precise ground-based measurements across a range of climate regions are essential to refine and verify the satellite observations. One of these stations is located near Desert Rock. These ground-based measurements also support

special research projects on radiation and climate processes in the Nevada region and serve as important verification for weather forecasts.

### *Las Vegas*

**Office of Oceanic and Atmospheric Research (OAR) - Special Operations and Research Division**

The Special Operations Research Division (SORD) of NOAA's Air Resources Laboratory is located in Las Vegas, NV. SORD conducts basic and applied research in atmospheric dispersion, particle resuspension, particle deposition, and the effects of airborne particles on atmospheric opacity. The Division supports issues of mutual interest to NOAA and the Department of Energy that relate to the Nevada Test Site, its atmospheric environment, and its emergency preparedness and emergency response activities.

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### *Statewide*

**National Marine Fisheries Service (NMFS) and National Ocean Service (NOS) - Damage Assessment, Remediation, and Restoration Program**

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) assesses and restores habitat, fisheries, protected species and recreational uses that have been harmed by oil spills, chemical releases, and ship groundings. Working with federal, state, and tribal entities, and responsible parties, we have recovered funding from responsible parties for restoration of critical habitats, fisheries, protected species and recreational uses nationwide. These projects promote recovery of the ecosystem and provide economic benefits from tourism, recreation, green jobs, coastal resiliency, property values and quality of life.

**National Ocean Service (NOS) – Regional Geodetic Advisor**

The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in La Jolla, CA serving the Pacific Southwest region – California and Nevada. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS

**National Weather Service** - **NEXRAD (WSR-88D) Systems**

NEXRAD is used to warn the people of the United States about dangerous weather and its location. This radar technology allows meteorologists to warn the public to take shelter with more notice than ever before. The NEXRAD network provides significant improvements in severe weather and flash flood warnings, air traffic safety, flow control for air traffic, resource protection at military bases, and management of water, agriculture, forest, and snow removal. NEXRAD radar has a range of up to 250 nautical miles, and can provide information about wind speed and direction, as well as the location, size, and shape of precipitation. There are 159 operational NEXRAD radar systems deployed throughout the United States and overseas, of which three are in Nevada.

**National Weather Service (NWS) - Automated Surface Observing Systems Stations**

The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and,

at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorms, and fog. There are 10 ASOS stations in Nevada.

**National Weather Service (NWS) - Cooperative Observer Program Sites**
The National Weather Service (NWS) Cooperative Observer Program (COOP) is truly the Nation's weather and climate observing network of, by and for the people. More than 10,000 volunteers take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The data are representative of where people live, work and play. The COOP was formally created in 1890 under the NWS Organic Act to provide observational meteorological data, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, required to define the climate of the United States and to help measure long-term climate changes, and to provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS. The data are also used by other federal (including the Department of Homeland Security), state and local entities, as well as private companies (such as the energy and insurance industries). There are 107 COOP sites in Nevada.

**National Weather Service (NWS) - NOAA Weather Radio All Hazards Transmitters**
NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). Known as the "Voice of NOAA's National Weather Service," NWR is provided as a public service by the NWS. NWR includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There are 14 NWR transmitters in Nevada.

**National Weather Service (NWS) - Incident Meteorologists**
The NWS, as mandated by Congress, provides fire weather forecast products and services to the fire and land management community for the protection of life and property, promotion of firefighter safety, and stewardship of America’s public wildlands. Since 1928, this effort has included providing critical on-scene support to wildfire managers via specially-trained NWS forecasters called Incident Meteorologists (IMETs). When a fire reaches a large enough size, IMETs are rapidly deployed to the incident and set-up a mobile weather center to provide constant weather updates and forecast briefings to the fire incident commanders. IMETs are very important members of the firefighting team, as changes in the fires are largely due to changes in the weather.

**National Ocean Service (NOS) - Students for Zero Waste Week**
Students are inviting their local communities to "Go Green and Think Blue" by joining them in the annual *Students for Zero Waste Week campaign*. During this campaign led by the Office of National Marine Sanctuaries, students focus on reducing land-based waste in order to protect the health of local marine environments. These young leaders are raising awareness of how single-use plastic and other types of litter affect the health of local watersheds, national marine sanctuaries, and the ocean. In addition, some schools are looking at ways to reduce their energy use on campus with hopes of raising awareness of how the burning of fossil fuels also impacts the health of the ocean.

***NOAA In Your State*** **is managed by NOAA's Office of Legislative and Intergovernmental Affairs and maintained with information provided by NOAA's Line, Corporate, and Staff Offices. Questions about specific programs or offices should be directed to the NOAA Line, Corporate, or Staff Office listed.**

**More information for those offices may be found at NOAA.gov.**